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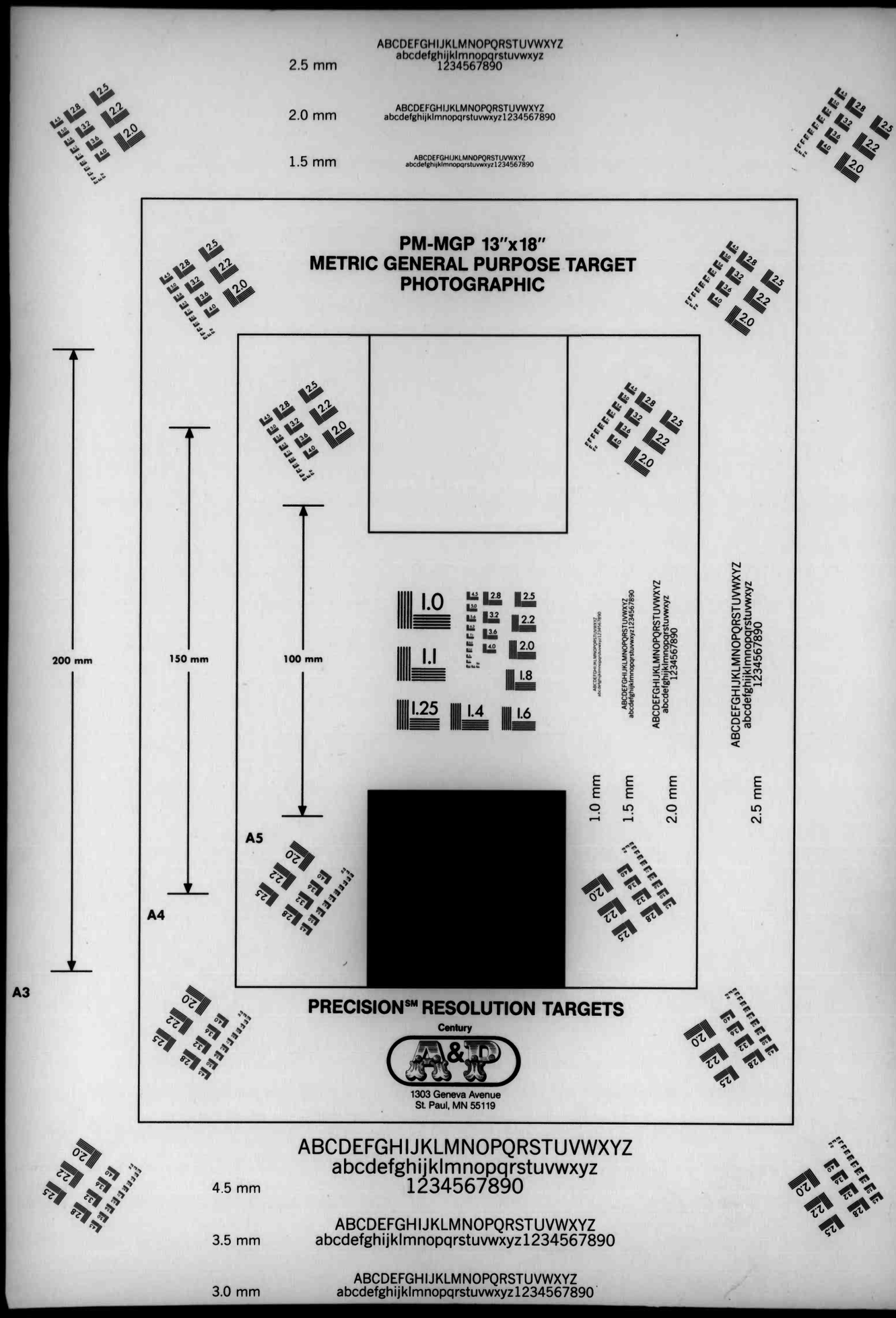
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MEMORANDUM TO INDUSTRY COMMITTEE NO. 67,
FOR THE CONSTRUCTION INDUSTRY.

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Economics Branch

MEMORANDUM TO INDUSTRY COMMITTEE NO. 67

FOR THE

CONSTRUCTION INDUSTRY

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FOREWORD

On September 14, 1943, the Administrator of the Wage and Hour Division pursuant to the provisions of the Fair Labor Standards Act of 1938, appointed Industry Committee No. 67 for the Construction Industry. It is the statutory duty of this committee to investigate conditions in the industry, and with due regard to economic and competitive conditions, to recommend to the Administrator the highest minimum wage (not in excess of forty cents an hour) which it determines will not substantially curtail employment in the industry. The statistical and other economic data given in the present memorandum have been assembled for the purpose of assisting the Industry Committee in the performance of its statutory function.

No attempt has been made to develop a complete economic study of the industry even from the limited point of view of the economic factors affecting the industry's current wage structure. The memorandum contains only such information as is readily available and is believed to be of interest to the committee in connection with its investigation of the economic and competitive conditions in the industry.

The memorandum was prepared by Werner Baer, Associate Economist, under the general supervision of Verl E. Roberts, Chief of the Minimum Wage studies Section.

Harry Weiss, Director
Economics Branch

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Harry Weiss, Director
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DEFINITION

Administrative Order No. 216 dated September 18, 1943 of the Wage and Hour Division defines the Construction Industry as follows:

> The Industry carried on by any person engaged in the designing, construction, reconstruction, alteration, repair and maintenance of buildings, structures, and other improvements; the assembling at the construction site and the installation of machinery and other facilities in or upon such buildings, structures, and improvements; and the dismantling, wrecking or other demolition of such improvements and facilities.
>
> a. It includes, but without limitation, houses, stores, factories; highways, railroads, bridges, and streets; sewers and watermains; foundations, piers, abutments and other heavy construction; reclamation; drainage, sanitation, irrigation, flood-control and water-power projects; pipe-lines; harbor and waterways construction and improvement; airports and airfields; transmission lines; and mining, industrial and commercial facilities and appurtenances.
> b. Provided, however, it shall not include construction carried on by persons, for their own use or occupancy, who are principally engaged in another industry.

The definition of the Construction Industry covers all occupations which are necessary to the operations of the Industry; provided, however, that where an employee covered by this definition is employed during the same workweek at two or more different minimum rates of pay, he shall be paid the highest of such rates for such workweek unless records concerning his employment are kept by his employer in accordance with applicable regulations of the Wage and Hour Division.

Inclusions and Exclusions

The following discussion on the scope of the definition is intended to be illustrative rather than exhaustive. It is, moreover, based exclusively upon the definition as such, and does not take into account the varying extent of coverage under the Fair Labor Standards Act of particular processes or operations. It should be noted, however, that a minimum wage order issued under the Fair Labor Standards Act affects only employees who are engaged in (interstate) commerce or in the production of goods for (interstate) commerce. A large part of all construction activity is in intrastate commerce rather than in interstate commerce. This report does not propose to describe which operations are in commerce or in the production of goods for commerce. It would appear, however, that at least some employees on almost every project would be covered by a wage order for the Industry, such as office workers or truck drivers who perform duties in connection with the receipt of materials from extra-state sources. 1/

1/ For a discussion of coverage under the Act, see Wage and Hour Division Interpretative Bulletin No. 5, paragraphs 12 and 13 and Release G-162, Applicability of the Fair Labor Standards Act to Employees of Building and Construction Contractors.

The basic principle of the definition is set forth in its opening paragraph, which defines the Construction Industry as "the industry carried on by any person engaged in the designing, construction, reconstruction, alteration, repair and maintenance of buildings, structures, and other improvements; the assembling at the construction site and the installation of machinery and other facilities in or upon such buildings, structures, and improvements; and the dismantling, wrecking or other demolition of such improvements and facilities."

Any production or process which is within the language of this opening paragraph is intended to be covered by the definition unless excluded by paragraph (b).

Paragraph (a) gives an illustrative enumeration of the types of construction embraced within the definition. While the major activities and projects are indicated, the general nature of the Industry precludes an exhaustive listing.

In terms of the types of persons or establishments engaged in construction, the Industry includes the operations of general contractors, of special trade contractors, and of builders. A general contractor is one who normally contracts for the entire work on a given construction project directly with the owner, who is responsible for the execution of the whole, and who usually does part of the actual work with his own forces. A special trade contractor is primarily engaged in a specialized trade such as heating and plumbing; painting, paper hanging and decorating; electrical installation; roofing; carpentering; masonry, plastering and lathing; steel erection and repairing; concreting; air-conditioning; flooring; excavation, foundation and grading; and all other special construction trades. A builder is engaged in construction for his own account for purposes of profit through sale, lease, or rental.

In terms of operations, the Industry includes all phases of construction from the designing 1/ to the completion of the building, structure or other improvement, as well as any subsequent dismantling, wrecking or other demolition. The Industry covers new construction and reconstruction, as well as alteration, repair and maintenance, regardless of whether they are intended for commercial, industrial, public, residential or other uses.

The definition of the Construction Industry also covers the assembling at the construction site and the installation of machinery and of other facilities in or upon buildings, structures, and other improvements. Thus the installation of appurtenances which are generally considered to be integral parts of a building structure or other improvement or which are commonly included in the contracts for its construction, such as elevators, pumps, plumbing, heating and ventilating equipment, lighting installations, refrigeration, etc., is within the scope of the present definition.

As provided in paragraph (b) of the definition, the Industry does not include "construction 2/ carried on by persons, for their own use or

1/ Designing, which includes architectural and engineering services, is within the scope of the definition, however, only when done by the construction contractor.

2/ The term "construction", as here used, has the same broad meaning as that set forth in the opening paragraph and paragraph (a) of the definition.

occupancy, who are principally engaged in another industry". Thus the construction operations of a cotton-goods manufacturer who erects an addition to his plant with his own employees are excluded from the definition. Such activities are, however, included within the definition of the Industry covering his manufacturing activities, which in this case would be the Textile Industry.

The manufacture of building materials and supplies including parts for so-called pre-fabricated houses is also not within the definition of this Industry, although their assembling at the construction site is covered. The manufacture of the various types of building materials is covered mainly by the wage order for the Metal, Plastics, Machinery, Instrument and Allied Industries, and by the Stone, Clay, Glass and Allied Industries and the Logging, Lumber and Timber, and Related Products Industries, 1/ as defined in Administrative Orders No. 192 and 209 respectively. On the other hand, the processing of building materials at the construction site if carried out as part of the construction activity, such as the mixing of the concrete or the preparation of grades or paving on the road is within the scope of the present definition.

1/ The definition of this industry includes in toto the Lumber and Timber Products Industry, for which a wage order has been in effect since November 3, 1941.

GENERAL DESCRIPTION OF THE INDUSTRY

The most recent basic statistical data concerning the Construction Industry are to be found in the Census of Business Volume IV, Construction, 1939. These data cover only that part of construction which is performed by independent builders, general contractors, and special trade contractors, and therefore correspond closely with the scope of the Industry definition. The data presented in Table 1 on construction activity and Table 2 on employment, which are taken from sources other than the Census, include in addition, "force account" work. "Force account" work is construction work done by persons or public agencies with their own forces on structures for their own use and occupancy. Instances where such force account work occurs in volume are: railroad right-of-way maintenance and alteration; telephone installation and maintenance, electrification maintenance, repair and extension; property management maintenance; street repair; home and farm improvements and repair on a wage basis; state and county road maintenance and repair; factory maintenance. Tables 1 and 2, therefore, give a more complete picture of construction activity as a whole, while the Census data relate more closely to the Industry as here defined.

The following description of the Construction Industry deals with it as an economic whole, regardless of the extent of coverage under the Fair Labor Standards Act.

Summary Statistics

In 1939, total construction activity amounted to 10.1 billion dollars, of which 6.1 billion was for new construction, 1 billion for work relief and 3 billion for maintenance. This activity gave employment to an average of 1,580,000 workers (Tables 1 and 2). Of this total construction activity, 4.5 billion dollars was reported by the Census of Construction as having been performed by builders, general contractors and special trade contractors organized in about 215,050 establishments and giving employment to an average of 1,073,655 workers. The combined wages and salaries of these workers amounted to about 1.4 billion dollars (Table 3).

In 1942, construction activity amounted to 17.3 billion dollars and employment had risen to an average of 1,987,000 workers. Forecast estimates for 1943 indicate construction activity at about 9.8 billion dollars (6.8 billion of new construction and about 3 billion dollars of maintenance) and employment at an average of 1,120,000 workers.

Kinds of Contractors

The distribution of construction activity in terms of establishments, value of work performed, employment, and payroll by kinds of contractors is presented in Table 3, which is based on Census data for 1939. It will be observed that only 2.4 percent of the total value of construction work was performed by independent builders in 1939, and that the bulk of construction activity was undertaken by general contractors and special trade contractors. General contractors accounted for 53.2 percent of the

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Table 1. Construction Industry: Construction activity by function and ownership, 1929-1942. a/
(millions of dollars)

Function or ownership	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
Total new, work relief, and maintenance	13,899	11,508	8,609	5,490	4,303	5,571	6,051	8,721	9,186	9,255	10,059	10,914	15,193	17,296
New construction	10,337	8,207	6,225	3,523	2,416	2,965	3,357	4,904	5,545	5,248	6,045	6,986	11,145	13,549
Total private	7,926	5,430	3,648	1,729	1,200	1,479	1,908	2,730	3,507	3,162	3,530	4,232	5,261	2,877
Residential (nonfarm) b/	3,562	1,790	1,460	638	413	591	913	1,368	1,655	1,767	2,046	2,359	2,981	1,460
Nonresidential building c/	2,501	1,988	1,096	544	417	441	457	696	1,022	683	732	982	1,306	527
Industrial d/	802	487	195	77	185	175	157	279	493	183	227	423	678	315
Commercial d/	1,131	934	545	247	128	149	187	244	350	276	296	334	388	107
Religious	151	125	89	49	25	22	25	33	42	48	47	57	58	27
Educational	122	120	101	49	17	34	37	61	40	40	33	52	44	14
Social and recreational	187	134	112	64	27	31	28	49	59	83	83	62	66	26
Hospital and institutional	108	86	54	32	15	15	11	20	27	34	30	34	43	19
Miscellaneous nonresidential building		-	-	26	20	15	12	12	11	19	16	20	29	19
Farm construction	300	240	145	85	125	140	200	200	210	220	226	246	300	195
Residential	175	140	90	55	75	75	110	110	115	125	130	146	175	114
Nonresidential	125	100	55	30	50	65	90	90	95	95	96	100	124	81
Public utility construction	1,563	1,512	947	462	245	307	338	464	620	492	526	645	774	695
Railroad	510	521	292	139	94	128	116	149	199	119	138	167	187	197
Street railway	82	85	69	29	21	30	40	45	39	41	54	51	30	14
Pipe line	97	30	77	37	7	12	20	41	67	21	35	31	76	59
Electric light and power	387	409	258	121	52	57	73	108	152	172	162	225	248	199
Gas	139	133	87	50	26	32	36	54	58	47	44	50	55	71
Telephone	328	310	153	79	41	43	48	62	100	88	89	117	173	150
Telegraph	20	24	11	7	4	5	5	5	5	4	4	4	5	5

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Table 1. Construction Industry: Construction activity by function and ownership, 1929-1942. a/ (continued)
(millions of dollars)

Function or ownership	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
Total public	2,411	2,777	2,577	1,794	1,216	1,486	1,449	2,174	2,038	2,086	2,515	2,754	5,884	10,672
Residential	-	-	-	-	-	1	9	61	93	35	76	205	479	600
Military and naval e/ f/	19	29	40	34	36	47	37	29	37	62	119	510	2,059	5,206
Nonresidential building	642	647	591	408	191	207	260	546	467	571	762	497	1,671	3,723
Industrial d/ f/	-	-	-	-	-	9	4	3	4	14	14	144	1,400	3,585
Commercial d/	-	-	-	-	-	10	8	13	17	21	28	33	24	9
Public administration	112	144	170	179	99	43	73	129	112	126	162	98	52	30
Educational	386	360	273	133	44	82	111	287	225	282	388	130	135	62
Social and recreational	44	32	25	20	13	21	25	45	40	40	43	17	16	7
Hospital and institutional	100	111	122	76	35	34	30	60	63	79	108	55	29	22
Miscellaneous nonresidential building	-	-	-	-	-	8	9	9	6	9	19	20	15	8
Highway	1,248	1,481	1,323	916	675	821	622	876	850	837	884	945	1,013	667
State	529	678	694	524	424	544	412	601	557	521	489	543	598	455
County	257	297	278	183	136	163	111	150	139	130	161	163	170	90
Municipal	462	506	351	209	115	114	99	125	154	186	234	239	245	122
Sewage disposal	127	142	114	69	34	54	68	115	95	89	135	86	68	58
Water supply	126	201	156	87	47	62	69	93	79	90	122	57	47	50
Conservation and development	86	111	135	139	168	245	317	336	306	293	312	331	389	289
Bureau of Reclamation	8	11	20	26	26	35	47	53	56	61	77	85	91	70
Army Engineers	59	75	81	81	102	142	177	192	176	157	156	168	186	65
Tennessee Valley Authority	-	-	-	-	5	17	28	32	30	31	32	38	82	129
Other conservation and development	19	25	34	32	35	51	65	59	44	44	47	40	30	25
All other Federal	13	9	9	6	4	8	8	7	10	15	14	22	36	21
Miscellaneous non-Federal public service enterprises g/	150	157	209	135	61	41	59	111	101	94	91	101	122	58
Work relief	-	-	-	-	114	578	406	1,130	775	1,202	1,032	805	627	291

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Table 1. Construction Industry: Construction activity by function and ownership, 1929-1942. a/ (concluded)
(millions of dollars)

Function or ownership	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942
Maintenance	3,562	3,301	2,584	1,967	1,773	2,028	2,288	2,687	2,866	2,805	2,982	3,123	3,421	3,456
Buildings (nonfarm)	1,290	1,300	880	650	570	700	900	1,170	1,240	1,225	1,239	1,307	1,384	1,371
Residential	820	840	570	420	370	450	580	760	810	800	810	855	906	889
Nonresidential	470	460	310	230	200	250	320	410	430	425	429	452	478	482
Farm	450	290	255	215	230	235	235	235	250	270	295	330	400	255
Residential	175	120	105	90	90	90	90	90	100	110	125	140	125	86
Nonresidential	275	170	150	125	140	145	145	145	150	160	170	190	275	169
Public utility	1,129	963	757	540	498	559	597	682	731	654	701	717	832	1,027
Railroad	874	722	548	360	332	375	404	457	504	427	474	485	588	777
Street railway	89	82	67	52	47	52	53	72	63	59	60	55	50	42
Pipe line	9	8	7	6	6	8	11	10	13	14	12	13	14	15
Electric light and power	40	41	43	44	40	45	48	55	63	63	65	68	73	77
Gas	22	21	20	18	17	19	19	21	20	21	20	20	20	21
Telephone	78	74	61	51	47	51	53	57	58	59	59	65	75	81
Telegraph	17	15	11	9	9	9	9	10	10	11	11	11	12	14
Highway	587	634	578	458	378	433	449	488	524	535	616	633	659	650
State	173	192	161	169	139	185	193	228	241	246	224	232	247	245
County	261	284	262	170	140	146	151	153	166	170	230	235	242	240
Municipal	153	158	155	119	99	102	105	107	117	119	162	166	170	165
Sewage disposal	16	16	15	14	13	12	13	14	15	17	18	18	19	22
Water supply	58	64	64	56	50	53	56	59	65	61	65	65	69	71
Rivers and harbors	32	34	35	34	34	36	38	39	41	43	48	53	58	60

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Source: Survey of Current Business, June 1943, p. 32

a/ Estimates compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce, except as noted. The data and methods used in making the estimates are outlined in Survey of Current Business, May 1942, pp. 24-26. Distinction between private and public construction is on the basis of the ownership of the completed structure rather than on the basis of the financing of the construction project.

b/ Estimates of new private nonfarm residential construction prepared by the Bureau of Labor Statistics.

c/ Excludes nonresidential building by privately-owned public utilities and nonresidential farm construction.

d/ Public industrial and commercial building not segregable from private construction in 1929-33.

e/ Includes cantonments, aeronautical facilities, navy yards and docks, Army and Navy hospitals, etc.

f/ Beginning with 1941, based on data prepared by the Construction Research Section of the Statistics Division of the War Production Board.

g/ Includes construction expenditures for such municipal enterprises as electric light and power plants, street railways and other transit systems, gas systems, ports, docks, harbors, ferries, airports, terminals, etc.

Table 2. Construction Industry: Estimated employment 1929 to 1943 a/

Year	Month	Average monthly employment (thousands of persons) Total	Public	Private
1929		2,426	511	1,915
1930		2,025	615	1,410
1931		1,705	639	1,066
1932		1,138	568	570
1933		935	524	411
1934		1,088	613	475
1935		1,230	612	618
1936		1,685	843	842
1937		1,686	724	962
1938		1,464	606	858
1939	Average ...	1,580	623	957
	January ...	1,262	518	744
	February ..	1,237	531	706
	March	1,262	521	741
	April	1,466	602	864
	May	1,650	673	977
	June	1,822	750	1,072
	July	1,887	753	1,134
	August	1,849	689	1,160
	September .	1,812	670	1,142
	October ...	1,698	641	1,057
	November ..	1,583	603	980
	December ..	1,431	525	906
1940	Average ...	1,746	608	1,138
	January ...	1,238	407	831
	February ..	1,150	361	789
	March	1,221	399	822
	April	1,448	500	948
	May	1,700	583	1,117
	June	1,887	623	1,264
	July	2,009	652	1,357
	August	2,072	663	1,409
	September .	2,085	679	1,406
	October ...	2,076	749	1,327
	November ..	2,069	828	1,241
	December ..	1,994	847	1,147
1941	Average ...	2,317	993	1,324
	January ...	1,907	874	1,033
	February ..	1,948	978	970
	March	1,942	947	995
	April	2,027	917	1,110
	May	2,247	928	1,319
	June	2,421	935	1,486
	July	2,626	1,021	1,605
	August	2,725	1,067	1,658
	September .	2,727	1,097	1,630
	October ...	2,669	1,144	1,525
	November ..	2,470	1,072	1,398
	December ..	2,092	935	1,157
1942	Average ...	1,987	1,262	725
	January ...	1,742	812	930
	February ..	1,634	802	832
	March	1,716	921	795
	April	1,870	1,078	792
	May	2,052	1,227	825
	June	2,240	1,383	857
	July	2,269	1,498	771
	August	2,377	1,681	696
	September .	2,231	1,592	639
	October ...	2,090	1,502	588
	November ..	1,910	1,395	515
	December ..	1,721	1,265	456
1943	Average ... b/	1,120	774	346
	January ...	1,549	1,161	388
	February ..	1,476	1,124	352
	March	1,461	1,118	343
	April	1,424	1,074	350
	May ..... c/	1,378	1,013	365

Source: U. S. Department of Labor, Bureau of Labor Statistics, Division of Construction and Public Employment.

a/ Includes wage earners, salaried employees, and special trade contractors actively engaged in construction work. The data cover new construction, and maintenance but exclude work on minor alterations and repairs. Force account work is included.

b/ Forecast figure.

c/ Preliminary figure, subject to revision.

(0186)

Table 3. Construction Industry: Distribution of establishments, value of work performed, employees, and pay roll, by kind of contractor, 1939

Kind of contractor	Establishments Number	Percent	Value of work performed Thousands of dollars	Percent	Employees average for the year a/ Number	Percent	Total pay roll Thousands of dollars	Percent
All contractors	215,050	100.0	4,519,794	100.0	1,073,655	100.0	1,403,771	100.0
Builders	3,705	1.7	108,258	2.4	20,268	1.9	25,798	1.8
General Contractors	35,158	16.4	2,403,630	53.2	600,974	56.0	770,766	54.9
Building contractors	29,641	13.8	1,174,693	26.0	304,274	28.4	389,151	27.8
Highway contractors	3,627	1.7	590,573	13.1	161,317	15.0	171,946	12.2
Heavy contractors	1,890	.9	638,366	14.1	135,383	12.6	209,669	14.9
Special trade contractors	176,187	81.9	2,007,906	44.4	452,413	42.1	607,207	43.3
Air conditioning b/	798	.4	40,396	.9	6,754	.6	10,715	.8
Carpentering	30,044	13.9	132,957	2.9	31,282	2.9	32,872	2.3
Concreting	4,464	2.2	57,030	1.3	18,106	1.7	19,407	1.4
Electrical (other than power lines)	15,915	7.4	222,774	4.9	42,390	3.9	68,749	4.9
Elevator (installation and repair)	409	.2	45,083	1.0	7,016	.7	15,138	1.1
Excavating and foundation	405	.2	8,007	.2	2,826	.3	2,932	.2
Excavating and grading	1,852	.9	22,536	.5	7,943	.7	8,017	.6
Flooring (wood only)	1,088	.5	13,735	.3	3,050	.3	4,094	.3
Flooring (wood and other)	455	.2	17,636	.4	3,280	.3	4,811	.3
Flooring (surfacing and resurfacing)	645	.3	2,821	.1	828	.1	853	.1
Heating and plumbing group	37,112	17.2	572,878	12.6	108,173	10.0	146,622	10.4
Heating and piping	2,822	1.3	75,550	1.7	14,251	1.3	21,796	1.6
Heating and piping, with sheet metal	1,572	.7	36,297	.8	6,821	.6	10,259	.7
Heating, piping and plumbing	13,166	6.1	251,075	5.5	47,381	4.4	64,008	4.5
Heating, piping, and plumbing, with sheet metal	2,122	1.0	62,384	1.4	11,954	1.1	17,044	1.2
Plumbing	16,609	7.7	141,334	3.1	26,412	2.5	32,070	2.3
Plumbing with sheet metal	761	.4	6,238	.1	1,354	.1	1,445	.1
Insulation	708	.3	26,509	.6	6,970	.6	10,025	.7
Lathing	522	.2	9,417	.2	3,253	.3	5,276	.4
Plastering and lathing	720	.3	24,762	.5	7,754	.7	11,686	.8
Plastering	5,347	2.5	55,756	1.2	17,413	1.6	21,625	1.5
Ornamental iron	622	.3	14,421	.3	2,622	.2	3,926	.3
Painting	10,046	4.6	46,347	1.0	13,733	1.3	16,916	1.2
Painting, paperhanging, and decorating	39,973	18.5	180,917	4.0	52,077	4.9	65,586	4.7
Roofing and sheet metal group	11,793	5.4	187,655	4.1	44,631	4.1	56,474	4.0
Roofing	4,875	2.2	78,716	1.7	18,951	1.7	23,290	1.7
Roofing and sheet metal	3,046	1.4	68,725	1.5	16,906	1.6	21,434	1.5
Sheet metal	3,872	1.8	40,214	.9	8,774	.8	11,750	.8

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Table 3. Construction Industry: Distribution of establishments, value of work performed, employees, and pay roll, by kind of contractor, 1939 (cont.)

Kind of contractor	Establishments		Value of work performed		Employees average for the year a/		Total pay roll	
	Number	Percent	Thousands of dollars	Percent	Number	Percent	Thousands of dollars	Percent
Masonry	7,029	3.3	97,339	2.2	30,273	2.8	36,765	2.6
Tile and mantel	2,149	1.1	48,944	1.1	11,362	1.1	16,174	1.2
Steel erection and repair	567	.3	80,863	1.8	10,404	1.0	18,501	1.3
Weather stripping	419	.2	7,214	.2	1,793	.2	2,833	.2
Glass and glazing	1,040	.5	17,821	.4	3,142	.3	5,134	.4
House moving	608	.3	4,016	.1	1,912	.2	1,649	.1
Other	1,467	.7	70,072	1.6	13,426	1.3	20,367	1.5

Source: Bureau of the Census, Census of Business, Construction, 1939

a/ Employees and pay roll include paid executives of corporations but not proprietors of unincorporated businesses.

b/ Air conditioning with or without heating, piping, plumbing, or sheet metal.

total value of work performed 1/, for 56.0 percent of construction employment and for 54.9 percent of the total construction payroll as reported by the census. Among these general contractors, building contractors did about one half of the business--both as to value of work performed and as to employment--while highway contractors and heavy contractors did about one quarter each of the general contracting business.

Special trade contractors accounted for 44.4 percent of all work performed on construction, for 42.1 percent of all construction employment and for 43.3 percent of the total construction payroll, even though the number of establishments engaged in special trade contracting was 81.9 percent of all construction establishments. This is due to the fact that special trade contractors have much smaller establishments than general contractors.

In terms of value of work performed, heating and plumbing with 12.6 percent of all construction was the most important among the special trades, with electrical installation (4.9 percent), roofing and sheet metal construction (4.1 percent), paper hanging and decorating (4.0 percent), carpentering (2.9 percent), and masonry (2.2 percent) following. The relative importance of the other special trades in the Construction Industry may be readily seen in the table.

Location

Construction activities are carried on in every State, with the geographical distribution roughly proportional to the distribution of the population. Table 4 shows the geographical distribution of construction activity during the year 1939 as reported by the Census. As might be expected, due to the unequal distribution of industry in the country, construction is substantially higher in the Middle Atlantic and Pacific States than in the predominantly agricultural regions of East South Central and West South Central States. In the other regions of the United States, work performed in the region bears about the same proportion to the United States total as the population of the region to the entire population of the United States.

Localization of Activities

A comparatively small part of contract construction was done across state lines in 1939. The volume of work performed by contractors outside

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1/ The Census data for work performed represent the total value of construction actually performed by the contractors' or builders' own forces. It includes work done in 1939 on jobs which were started prior to that year; work started and completed in 1939; and that portion of the work which was done in 1939 on projects which were incomplete at the end of the year. Contractors reported work performed in terms of contract price, not cost of labor and materials used, and therefore included profit. Builders reported value of work performed in terms of actual cost of improvements and therefore excluded profit. Work sub-let to others by the general contractor or builder was not included as work performed in their reports but was reported as part of the business of the special trade contractors who received the sub-contracts.

Table 4. Construction Industry: Geographic distribution of establishments and employees, 1939 a/

Region and State	Establishments		Employees b/ (average for the year)	
	Number	Percent	Number	Percent
United States, total	215,050	100.0	1,073,655	100.0
New England	18,910	8.8	76,089	7.1
Maine	1,696	.8	4,837	.5
New Hampshire	992	.5	3,439	.3
Vermont	746	.3	2,104	.2
Massachusetts	8,509	4.0	38,353	3.6
Rhode Island	1,565	.7	6,472	.6
Connecticut	5,402	2.5	20,884	1.9
Middle Atlantic	50,979	23.7	249,846	23.3
New York	24,632	11.5	137,279	12.8
New Jersey	9,128	4.2	32,768	3.1
Pennsylvania	17,219	8.0	79,799	7.4
East North Central	47,263	22.0	204,097	19.1
Ohio	12,407	5.8	49,983	4.7
Indiana	6,172	2.9	22,846	2.1
Illinois	12,855	5.9	69,705	6.6
Michigan	8,822	4.1	37,630	3.5
Wisconsin	7,007	3.3	23,933	2.2
West North Central	23,892	11.1	103,298	9.6
Minnesota	6,006	2.8	28,381	2.7
Iowa	5,063	2.4	19,435	1.8
Missouri	6,527	3.0	31,468	3.0
North Dakota	557	.3	2,434	.2
South Dakota	708	.3	2,612	.2
Nebraska	2,167	1.0	8,903	.8
Kansas	2,864	1.3	10,065	.9
South Atlantic	17,634	8.2	151,486	14.1
Delaware	813	.4	4,109	.4
Maryland	3,302	1.5	21,427	2.0
District of Columbia	1,147	.5	13,933	1.3
Virginia	3,142	1.5	22,983	2.1
West Virginia	1,436	.7	7,701	.7
North Carolina	2,410	1.1	27,090	2.6
South Carolina	843	.4	9,942	.9
Georgia	1,936	.9	22,451	2.1
Florida	2,605	1.2	21,850	2.0
East South Central	7,494	3.5	52,630	4.9
Kentucky	2,767	1.3	13,281	1.2
Tennessee	2,382	1.1	19,882	1.9
Alabama	1,233	.6	13,042	1.2
Mississippi	1,112	.5	6,425	.6
West South Central	13,034	6.1	87,280	8.1
Arkansas	1,127	.6	5,141	.5
Louisiana	1,641	.8	16,129	1.5
Oklahoma	2,106	1.0	12,820	1.2
Texas	8,166	3.7	53,190	4.9
Mountain	6,751	3.1	32,477	3.0
Montana	769	.4	4,123	.4
Idaho	708	.3	3,077	.3
Wyoming	556	.3	2,255	.2
Colorado	2,028	.9	9,668	.9
New Mexico	503	.2	3,039	.3
Arizona	865	.4	3,751	.3
Utah	1,104	.5	5,270	.5
Nevada	218	.1	1,294	.1
Pacific	29,093	13.5	116,452	10.8
Washington	3,478	1.6	17,113	1.6
Oregon	2,036	.9	9,638	.9
California	23,579	11.0	89,701	8.3

Source: Bureau of the Census, Census of Business, Construction, 1939.

a/ Geographic distribution is based on the office address of the reporting establishment, not on the location of the construction project.

b/ Includes paid executives of corporations but not proprietors of unincorporated businesses.

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of their respective "home states," according to the Census, was only 15.2 percent of the national total. Of this out-of-state business, 72.1 percent was performed by general contractors and was distributed among them as follows: heavy contractors, about 233 million dollars; building contractors, about 146 million dollars; and highway contractors, about 117 million dollars. Special trade contractors performed 27.3 percent of the out-of-state work done by all establishments. Steel erection, which is dominated by manufacturers of structural steel who operate nationally, accounted for 25.3 percent of this special trade contractor total. It appears that out-of-state business is important only in lines which require specialized heavy operational equipment, as in heavy and highway projects, or which require an extensive operating organization substantially capitalized, as in large building projects, and in those projects which are dominated by installation departments or subsidiaries of manufacturers.

Approximately 50 percent of all work performed by all kinds of contractors was done in their home city, and in the case of special trade contractors, 66.4 percent of their work was local.

Size of Business

Contract construction when analyzed by size of business (Table 5) discloses two salient facts: first, 53.1 percent of the reporting concerns did less than $5,000 of work in 1939 and accounted for only 5.6 percent of the volume of all contract construction; and second, only one-half of 1 percent of all establishments had an annual volume of $500,000 or more but accounted for 27.4 percent of the work performed by all contractors in 1939. As would be expected, the establishments with a volume of less than $5,000 were largely special trade contractors. The small group with a volume of $500,000 or over is dominated by general contractors, but also includes 163 special trade contractors composed largely of installation and erection departments or subsidiaries of manufacturers. 1/

Legal Forms of Organization

As shown in Table 6, of approximately 250,000 contractors in the industry, only about 18,400, or 7.6 percent, were corporations and the remainder, 92.4 percent, were proprietorships, partnerships, and other forms of non-corporate organization. Despite their small number, however, corporate establishments performed 46.4 percent of all contract construction.

The highest ratio of corporate to non-corporate establishments occurs among heavy contractors, where nearly one out of every two concerns was incorporated. The opposite extreme is found among special trade contractors, where about 16 out of every 17 establishments were non-corporate.

Function and Ownership of Construction Activity

The distribution of construction activity among the various types of construction both as to function and ownership can be readily gathered

1/ Census of Construction, 1939, p. 17.

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Table 5. Construction Industry: Distribution of establishments and work performed, by size of business, 1939

Value of work performed	All contractors		Percent of total for each size group for: All contractors		Builders		Building contractors		Highway contractors		Heavy contractors		Special trade contractors	
	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed
	100.0	100.0	--	--	--	--	--	--	--	--	--	--	--	--
Less than $5,000	53.1	5.6	100.0	100.0	0.7	.9	4.7	6.6	.2	.1	.1	.1	94.3	92.3
$ 5,000-$ 9,999	17.0	5.7	100.0	100.0	2.3	2.3	17.2	17.6	.6	.6	.2	.2	79.7	79.3
$10,000-$14,999	8.2	4.7	100.0	100.0	2.9	2.9	23.4	23.5	1.1	1.1	.4	.4	72.2	72.1
$15,000-$19,999	5.1	4.1	100.0	100.0	3.2	3.2	27.7	27.7	1.6	1.6	.5	.5	67.0	67.0
$20,000-$24,999	3.8	4.0	100.0	100.0	3.3	3.2	30.7	30.7	2.0	2.0	.8	.8	63.2	63.3
$25,000-$29,999	1.8	2.3	100.0	100.0	4.2	4.2	30.4	30.4	3.1	3.1	1.8	1.8	60.5	60.5
$ 30,000-$ 49,999	4.2	7.7	100.0	100.0	3.6	3.6	30.0	30.0	4.9	5.0	2.2	2.3	59.3	59.1
$ 50,000-$ 99,999	3.5	11.6	100.0	100.0	3.8	3.8	30.6	30.6	8.0	8.3	4.3	4.5	53.3	52.8
$100,000-$299,999	2.4	18.9	100.0	100.0	3.0	2.8	29.9	29.8	18.3	19.5	9.4	9.8	39.4	38.1
$300,000-$499,999	.4	8.0	100.0	100.0	2.5	2.4	25.5	25.7	27.3	27.7	18.1	18.3	26.6	25.9
$500,000 and over	.5	27.4	100.0	100.0	1.3	1.0	28.8	25.1	24.8	20.2	29.2	36.5	15.9	17.2

Source: Bureau of the Census, Census of Business; Construction, 1939

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Table 6. Construction Industry: Percentage distribution of establishments, value of work performed, employees, and payroll, by kind of contractor and type of ownership, 1939

(percent of total)

Kind of contractor	Establishments			Value of work performed			Employees			Payroll		
	Total a/	Corporate	Non-corporate	Total a/	Corporate	Non-corporate	Total a/	Corporate	Non-corporate	Total a/	Corporate	Non-corporate
All contractors	100.0	7.6	92.4	100.0	46.4	53.6	100.0	44.1	55.9	100.0	52.6	47.4
Builders	1.7	.3	1.4	2.4	1.1	1.3	1.9	.9	1.0	1.8	.9	.9
Building contractors	13.8	1.6	12.2	26.0	10.7	15.3	28.4	11.6	16.8	27.7	13.6	14.1
Highway contractors	1.7	.6	1.1	13.1	7.4	5.7	15.0	8.0	7.0	12.2	7.2	5.0
Heavy contractors	.9	.4	.5	14.2	10.8	3.4	12.6	9.2	3.4	15.0	12.0	3.0
Special trade contractors	81.9	4.7	77.2	44.3	16.4	27.9	42.1	14.4	27.7	43.3	18.9	24.4

Source: Bureau of the Census, Census of Business, Construction, 1939

a/ United States totals: Establishments, 215,050; work performed, $4,519,794,000; employees, 1,073,655; payroll, $1,403,771,000.

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from Table 1, where comprehensive data are presented for the period from 1929 through 1942. A brief discussion of the comparative importance of the various types of construction in the American peacetime economy may be based on an analysis of the data for the year 1939, a year of generally good business activity, not yet affected by large orders for the defense program.

Of the total of 10.1 billion dollars spent on all construction, 6.1 billion was for new construction, 1.0 billion for work relief construction, and 3 billion for maintenance. About 60 percent was for private construction and about 40 percent for public construction. The distinction between private and public construction has been made on the basis of ownership of the completed structure rather than on the basis of the financing of the construction project or the type of organization performing such construction. 1/

About 60 percent of all private construction was for residential non-farm purposes. Industrial and commercial construction together and public utilities construction accounted for another 15 percent each of all private construction. Farm construction accounted for only about 7 percent of all private construction. As to public construction, 35 percent of the expenditures were for highway construction. Educational buildings, conservation and development, sewage disposal and water supply facilities were other large items in the field of public construction.

If construction activity is analyzed by function without regard as to whether a project was for private or for public ownership, the following picture presents itself with regard to new construction: 2.1 billion dollars were spent for residential non-farm building; about 900 million for administrative, educational, school, hospital and religious buildings; a similar amount for highway construction; 800 million dollars for public utilities, sewage disposal and water supply; about 600 million dollars for industrial and commercial construction; and about 300 million dollars for conservation and development.

Seasonal Fluctuations

Seasonal fluctuations are an important factor in the economics of the Construction Industry. 2/ Certain types of construction such as residential building, farm building and highway construction display marked seasonal movements. Seasonal elements have slight effect upon the construction of industrial buildings. Military construction likewise is little affected by seasonal factors. Furthermore, the development of the war economy and the resultant concentration upon particular types of construction has resulted in a definite decrease in seasonal variations.

As Table 2 shows, construction employment has a tendency to fall off in the winter months, reaching a low during January, February and March. It tends to concentrate in the summer months, reaching a peak during June, July, August and September.

1/ U. S. Department of Commerce, Domestic Commerce Series No. 99: Construction Activity in the United States 1915-1937, p. 16.

2/ No seasonal exemption from the overtime provisions of the Fair Labor Standards Act has been granted to the Construction Industry under Section 7(b)(3) of the Act.

The seasonal character of a large sector of the Construction Industry has resulted in a wage structure of high hourly rates. Annual earnings of construction workers, however, have only been moderately high because the annual average of weekly hours worked has been low even though technical innovations and improved construction methods have made winter work possible and even practicable in many cases.

While mass production methods have been developed in many other branches of industry which produce durable consumer goods, residential building is still largely carried out on a small-scale basis. The bulk of the work performed in construction is undertaken by small contractors who are unable to apply the methods of mass production to their operations.

Among the suggestions for reducing seasonal unemployment have been flexible wage rates, to be lower in the slack season than in the busy season; flexible hours with a longer workweek during the busy season; and a guaranteed annual wage with lower hourly rates. These recommendations were based on the consideration that high hourly rates could probably be reduced if the guaranteed annual wage were higher than the present actual annual earnings. 1/

Labor Costs as Related to Total Costs

Labor costs as percentage of the value of work performed for the various kinds of contractors are shown in Table 7. Since the value of work performed includes net profits in the case of general contractors and of special trade contractors, it is not strictly equivalent to total costs. It is, however, the closest approximation to total costs which is available from the existing statistical sources. Labor costs in the Construction Industry average 31 percent of total costs, with labor costs of general contractors ranging from 29 to 33 percent and labor costs of the more important special trades ranging from 23 to 39 percent of total costs.

Principal Labor Unions

While exact data on the extent of unionization in the Construction Industry are not available, a survey conducted by the Bureau of Labor Statistics indicates that about one-half of all employees in the Industry are covered by written collective bargaining agreements. 2/

Building trades unions are among the oldest and strongest in the United States. In 1937 the twenty internationals of the Building and Construction Trades Department of the American Federation of Labor claimed a total membership of over a million members, of whom almost 700,000 were in the construction industry. Increased building activity during the last few years has resulted in large increases in union membership. By the end of 1941 the Building and Construction Trades Department claimed nearly 1.6 million construction members -- more than double the 1937 membership.

1/ Twentieth Century Fund: How Collective Bargaining Works, 1942, p. 223.

2/ Bureau of Labor Statistics, Labor Information Bulletin, June 1942, p. 2.

Table 7. Construction Industry: Payroll as percent of value of work performed, 1939

Kind of contractor	Total payroll as percent of value of work performed	Kind of contractor	Total payroll as percent of value of work performed
All contractors	31.0	Plumbing	23.0
Builders	24.0	Plumbing with sheet metal	23.0
General Contractors	32.0	Insulation	38.0
Building contractors	33.0	Lathing	56.0
Highway contractors	29.0	Plastering and lathing	47.0
Heavy contractors	33.0	Plastering	39.0
Special trade contractors	30.0	Ornamental iron	27.0
Air conditioning	27.0	Painting	36.0
Carpentering	25.0	Painting, paperhanging and decorating	36.0
Concreting	34.0	Roofing and sheet metal group	30.0
Electrical (other than power lines)	31.0	Roofing	30.0
Elevator (installation and repair)	34.0	Roofing and sheet metal	31.0
Excavating and foundation	37.0	Sheet metal	29.0
Excavating and grading	36.0	Masonry	38.0
Flooring (wood only)	30.0	Tile and mantel	33.0
Flooring (wood and other)	27.0	Steel erection and repair	23.0
Flooring (surfacing and resurfacing)	30.0	Weather stripping	39.0
Heating and plumbing group	26.0	Glass and glazing	29.0
Heating and piping	29.0	House moving	41.0
Heating and piping, with sheet metal	28.0	Other	29.0
Heating, piping and plumbing	25.0		
Heating, piping, and plumbing with sheet metal	27.0		

Source: Bureau of the Census, Census of Business, Construction, 1939

The principal unions in the field of the Construction Industry and their membership in the Industry are:

Union	Approximate number of members
American Federation of Labor, Building and Construction Trades Department 1/	
International Association of Heat and Frost Insulators and Asbestos Workers	4,000
Bricklayers, Masons and Plasterers' International Union	65,000
International Association of Bridge, Structural and Ornamental Iron Workers	52,000
United Brotherhood of Carpenters and Joiners	300,000
International Brotherhood of Electrical Workers	201,000
International Union of Elevator Constructors	10,200
International Union of Operating Engineers	80,000
International Hod Carriers, Building and Common Laborers' Union	183,700
International Union of Wood, Wire and Metal Lathers	8,100
International Association of Marble, Stone and Slate Polishers, Rubbers and Sawyers, Tile and Marble Setters' Helpers and Terrazzo Helpers	5,500
Sheet Metal Workers' International Association	20,000
Brotherhood of Painters, Decorators and Paperhangers	104,900
Operative Plasterers' and Cement Finishers' International Association	21,200
United Association of Journeyman Plumbers and Steam Fitters	45,400
United Slate, Tile and Composition Roofers, Damp and Waterproof Workers' Association	4,400
Journeymen Stonecutters' Association	4,100
Paving Cutters' Union	2,000
International Brotherhood of Teamsters, Chauffeurs, Stablemen, and Helpers	2/
Other Unions	
International Federation of Technical Engineers, Architects, and Draftsmen's Unions, A. F. of L.	2,100 3/
American Federation of Office Employees, International Council, A. F. of L.	2/
United Office and Professional Workers of America, C.I.O.	2/
United Construction Workers	2/

1/ Membership figures from Twentieth Century Fund, How Collective Bargaining Works, 1942, p. 196-197. The figures are averages for 1940-1941. They cover total membership including members employed outside of construction.

2/ Not available.

3/ Membership figures obtained directly from the union.

Construction Activity

Construction activity in the United States reached a record high in 1942 of more than 17 billion dollars (Table 1). Total construction including new construction and maintenance amounted to 13,899 millions of dollars in 1929. During the depression it reached a low point of 4,303 millions in 1933 and then increased to 10,914 millions of dollars in 1940. Stimulated by the war, construction reached 15,193 millions in 1941 and 17,296 millions of dollars in 1942.

The expenditures on maintenance reflect the fact that even in bad times existing facilities are more or less preserved intact. These expenditures fluctuated from 3,562 million dollars in 1929 to 1,773 million dollars in 1933 and 3,456 million dollars in 1942.

The particular development of construction in the depression and recovery of the 1930's is indicated by the data on total private construction. Here activity fell from 7,926 million dollars in 1929 to 1,200 million dollars in 1933. While private construction activity subsequently recovered, it reached only 4,232 million dollars in 1940, a level only slightly above 50 percent of the private construction activity in 1929.

Expenditures on public construction (not including work relief expenditures) fell from 2,777 million dollars in 1930 to 1,216 million dollars in 1933, remained at a low level in both 1934 (1,486 million dollars) and 1935 (1,449 million dollars) and reached the 1930 level again only in 1940.

Expenditures on work relief took up some of the slack in private construction from 1933 on. The highest annual expenditure on work relief construction was 1,202 million dollars in 1938.

The years 1940 to 1942 saw a tremendous rise in most types of construction. Private construction participated in that expansion only in 1941 when it amounted to 5,261 million dollars; it dropped in 1942 to 2,877 million dollars. Public construction rose to 5,884 million dollars in 1941 and to 10,672 million dollars in 1942. This record activity resulted from a successive expansion of the defense and war construction program before and after our entry into the war. The tremendous increase was mainly due to military construction and to the creation of additional industrial capacity for war production. This program was fairly well completed by the end of 1942, and in 1943 construction has been moving sharply downward. Successive curtailments of civilian construction and increasing controls and limitations with respect to critical materials accentuate this downward swing. In addition to shortages of metals, a tight situation has developed with respect to lumber, largely due to manpower shortages. 1/ The War Production Board has initiated a policy of limiting the creation of new facilities of all

1/ F. W. Dodge Corporation, Construction Outlook for 1943, published in November, 1942.

kinds by strict tests of essentiality, by utilizing existing factories instead of building new ones, by concentrating civilian production in fewer plants, and by a fuller utilization of small plants in war production. The National Housing Agency is carrying out a program of fuller use of existing housing facilities in defense areas.

In view of all these developments, the forecast estimates for 1943 give total new construction in 1943 at 6,763 million dollars, of which private construction will account for 1,445 million dollars and public construction for 5,318 million dollars. Of the latter, expenditures on military construction will contribute 2,356 millions, and expenditures on industrial facilities 1,446 millions. 1/ The number of large projects will be small in 1943, the bulk of the year's program consisting of moderate-sized projects. While few new industrial plants, cantonments, bases, and supply depots are being built, many new units are being added to expand existing improvements.

While these developments represent a percentage drop of about 50 percent, it should be observed that this decrease represents a decline from the record construction volume of all times. The estimated 1943 total is still about as large as the level of construction in the last year of the peace economy, 1940, and it compares favorably with the 1920-1939 average.

Trends of Employment

Table 2 presents data on employment in construction activities, giving average annual employment since 1929, and employment month by month since 1939. These data cover both new construction and maintenance, including force account work, but excluding work on minor alterations and repairs.

The data show that 2,426,000 persons were employed on construction in 1929. From a depression low in 1933 of 935,000 persons, total employment rose to 2,317,000 in 1941 and to 1,987,000 in 1942. In 1943 an average annual employment of 1,120,000 persons is forecast. The drop in construction employment from 1942 to 1943 will reduce the average number of workers employed by over 800,000. Such workers will, of course, find ready employment in other industries during the war period.

Post-War Outlook

The post-war outlook for the construction industry is generally considered to be excellent. Most plans concerned with securing full employment after the war and with preventing a depression give a major place to an expansion of construction activity, both public and private. 2/ The general needs of the country for repair, replacement, and additions to its buildings will be very great, because a large volume of civilian work and essential maintenance and replacement activities by non-war industries and by governmental agencies are being held in abeyance during the present war. The volume of residential building may be expected to be especially high owing to the fact that during the entire period of the 1930's, residential building was not sufficient to meet adequate housing needs. If great programs of slum clearance and of highway and airport construction should be initiated, as is being frequently suggested, the construction industry would be especially favored.

1/ U.S. Department of Labor, Release, Construction Activity, first half of 1943.

2/ National Resources Planning Board: Demobilization and Readjustment June 1943.

EARNINGS

Current Wage Structure

The construction industry is a high-wage industry and very few of its employees work at hourly rates of less than 40 cents an hour. The few workers so employed are for the most part either employees working in the offices of contractors or common laborers in a few areas of the South. While the Wage and Hour and Public Contracts Divisions do not have sufficiently adequate information to make an exact determination, it is estimated that no more than one percent, or about 10,000 employees out of the forecast annual average of 1,120,000 employees in 1943, are receiving wages of less than 40 cents an hour. 1/

The movement of average hourly earnings in construction is shown in Table 8 for the period since 1929. It will be seen that wage rates for both common labor and skilled labor have advanced continuously since 1935. The increase in average hourly earnings has been especially marked with respect to common labor, where rates in 1942 were about 60 percent higher than in 1935. Rates for skilled labor in 1942 were about 40 percent higher than in 1935. Average hourly earnings for all construction labor advanced from 82 cents in 1935 to $1.15 in 1942.

While these rates are high, they do not represent a correspondingly high annual income. This is due to the relatively short average working week for construction labor caused by seasonal fluctuations. However, even in this respect, the situation of construction labor has improved considerably. As Table 8 shows, construction labor worked 30.1 average weekly hours in 1935, 33.1 average weekly hours in 1940, and 36.6 average weekly hours in 1942. In April, 1943, construction labor worked an average of 38.1 hours a week.

Wage Rates Under Union Agreements

Union wages in the building trades, based on a survey made in 75 cities as of July 1, 1942, have been published by the Bureau of Labor Statistics. Tables 9 and 10 present average rates per hour for journeymen and for helpers and laborers by trades. There were no hourly rates below 40 cents, and even the number of journeymen earning less than $1.00 and of union helpers and laborers earning less than 50 cents is insignificant.

The average rate for journeymen was $1.56 per hour, with the range extending from the granite cutters at $1.46, the glaziers at $1.48, and the paper hangers at $1.49 to plasterers at $1.76 and carpenters at $1.77 an hour. Only one-tenth of one percent of all journeymen earned less than $1.00 an hour. Union helpers and laborers were paid at an average rate of 84 cents an hour, with the range extending from 74 cents for composition roofers' helpers and 79 cents for building laborers to $1.12 for marble setters' helpers and $1.18 for elevator constructors' helpers. Only 3.8 percent of all helpers and laborers received less than 50 cents an hour.

1/ On the basis of these estimates, the establishment for a minimum wage of 40 cents an hour would involve an increase in total wage bills in the Industry of no more than one-tenth of one percent and would increase total production costs by less than three-hundredths of one percent.

(0186)

Table 8. Construction Industry: Wage rates for common and skilled labor, average hourly earnings, and average weekly hours, 1929-1943

Year and month	Average hourly rate for common labor a/	Average hourly rate for skilled labor a/ b/	Average hourly earnings for all construction labor c/	Average weekly hours for all construction labor
1929	$0.547	$1.36	d/	d/
1930	.561	1.38	d/	d/
1931	.500	1.27	d/	d/
1932	.427	1.02	d/	d/
1933	.456	1.01	d/	d/
1934	.532	1.10	$0.795	28.9
1935	.528	1.09	.815	30.1
1936	.564	1.15	.824	32.8
1937	.645	1.32	.903	33.4
1938	.673	1.41	.908	32.1
1939	.683	1.44	.932	32.6
1940	.699	1.47	.958	33.1
1941	.743	1.50	1.009	34.7
1942	.805	1.56	1.152	36.6
1943				
January	.833	1.61	1.240	37.1
February	.832	1.61	1.240	36.3
March	.842	1.61	1.243	37.4
April	.858	1.61	1.235	38.1

Source: Survey of Current Business and Bureau of Labor Statistics, Hours and Earnings in the United States, 1932-40, with supplement for 1941, and subsequent monthly releases

a/ Compiled by the Engineering News Record from monthly reports from 20 cities. Union wages actually paid are used except where non-union jobs predominate. In some instances it has been necessary to average the rates for union and non-union labor, where both exists.

b/ Average rate of the three principal trades - carpenters, bricklayers, and structural ironworkers in heavy construction.

c/ Earnings consist of compensation actually received and are affected by overtime rates, bonuses, deductions, and other factors.

d/ Data not available.

(0186)

Table 9. Construction Industry: Hourly wage rates of union journeymen in the building trades, July 1, 1942 a/

Trade	Average rate per hour	Percent of union journeymen whose rates were - Under $1.00	$1.00 and Over
All Journeymen	$1.556	.1	99.9
Asbestos workers	1.569	3.9	96.1
Boilermakers	1.650	-	100.0
Carpenters	1.774	*	100.0
Cement finishers	1.500	-	100.0
Electricians, inside wiremen	1.667	.1	99.9
Elevator constructors	1.623	-	100.0
Glaziers	1.481	2.1	97.9
Granite cutters	1.458	2.8	97.2
Lathers	1.713	-	100.0
Machinists	1.520	-	100.0
Marble setters	1.640	-	100.0
Mosaic and terrazzo workers	1.512	-	100.0
Painters	1.494	*	100.0
Paperhangers	1.487	.1	99.9
Plasterers	1.758	-	100.0
Plumbers and gas fitters	1.674	-	100.0
Rodmen	1.528	-	100.0
Roofers, composition	1.336	3.7	96.3
Roofers, slate and tile	1.492	-	100.0
Sheet-metal workers	1.563	-	100.0
Sign painters	1.600	*	100.0
Steam and sprinkler fitters	1.615	-	100.0
Stonecutters	1.556	5.8	94.2
Stonemasons	1.592	-	100.0
Structural-iron workers	1.695	-	100.0
Tile layers	1.540	-	100.0

Source: Bureau of Labor Statistics, Union Wages and Hours in the Building Trades, July 1, 1942

a/ Based on a survey made in 75 cities.

* Less than .1 percent.

(0186)

Table 10. Construction Industry: Hourly wage rates of union helpers and laborers in the building trades, July 1, 1942 a/

Trade	Average rate per hour	Percent of union helpers and laborers whose rates were - Under $.50	$.50 and Over
All Helpers and laborers	$0.839	3.8	96.2
Bricklayers' tenders	.960	.4	99.6
Building laborers	.788	5.0	95.0
Composition roofers' helpers	.738	-	100.0
Elevator constructors' helpers	1.183	-	100.0
Marble setters' helpers	1.116	-	100.0
Plasterers' laborers	1.025	1.0	99.0
Plumbers' laborers	.932	.8	99.2
Steam and sprinkler fitters' helpers	1.082	-	100.0
Terrazzo workers' helpers	1.085	-	100.0
Tile layers' helpers	1.072	-	100.0

Source: Bureau of Labor Statistics, Union Wages and Hours in the Building Trades, July 1, 1942

a/ Based on a survey made in 75 cities.

(0186)

Minimum Rates of Pay under Federal Legislation

The Construction Industry is affected by the Davis-Bacon Prevailing Wage Act, which applies to Federal contracts in excess of $2,000 for construction and repair of public buildings and public works. The Secretary of Labor determines the hourly rates prevailing in the immediate neighborhood of the construction site for each occupation and determines that these shall be the minimum rates for the various classes of laborers and mechanics. From the determinations under the Davis-Bacon Act, material regarding prevailing wages can be derived. A review of the Davis-Bacon recommendations of prevailing wage rates does not disclose any wage rates of less than 40 cents per hour paid to laborers on Federally financed construction projects.

Since 1941 a new factor has come into play tending to increase wages paid on federal construction projects and, through competition, for labor on private construction projects as well. According to Section 5 of the Stabilization Agreement of July 22, 1941 between certain Federal agencies engaged in defense construction and the Building and Construction Trades Department of the American Federation of Labor, consideration must be given in the administration of the Davis-Bacon Act not only to the wages prevailing in the vicinity of the project, but also to the wages prevailing in the place from which labor is likely to be drawn.

A study of wage adjustment cases since the first of 1943 before the Wage Adjustment Board for the building construction trades industry appears to indicate that the board has taken the position that anything below 50 cents is patently substandard.

Wage Rates by Regions

Since wage rates vary considerably between the various regions of the United States, and lower wage rates prevail in the South than in the North, data showing wage rates by region have been assembled. Table 11 presents average hourly earnings in building construction, by kind of contractor, for the United States as a whole and for the three Southern regions separately, for May 1943. The establishments reported from Southern regions employed about 20 percent of the number of wage earners reported by all establishments in the United States. The average hourly rate for the country as a whole was $1.25. The table shows, however, that even in the Southern regions, average hourly wage rates for building construction are high, the lowest reported rate being that for excavating, grading, foundation, and concrete workers in the West South Central region at 66 cents per hour. The bulk of the workers even in the South are employed at hourly wage rates of more than $1.00; average hourly earnings for building construction labor as a whole amount to $1.00 in the East South Central States, $1.04 in the West South Central States, and $1.09 in the South Atlantic region.

Wage Rates for Common Laborers

Data on the hourly entrance rates of adult male common laborers in building construction are presented annually by the Bureau of Labor Statistics. Table 12 indicates that only 4.7 percent of all common laborers in building construction worked at hourly entrance rates of less than 40 cents in July 1942. In the South and Soutwest 11.0 percent earned less than 40 cents an hour, while in the North and West only 0.1 percent were in this wage group. The level of common labor rates frequently

(0186)

Table 11. Building Construction: Average hourly earnings by kind of contractor for the United States as a whole, and for the Southern regions, May 1943 a/ b/

	U. S. Total c/			South Atlantic c/			East South Central d/			West South Central e/		
	Number of reporting establishments	Number of wage earners	Average hourly earnings (cents)	Number of reporting establishments	Number of wage earners	Average hourly earnings (cents)	Number of reporting establishments	Number of wage earners	Average hourly earnings (cents)	Number of reporting establishments	Number of wage earners	Average hourly earnings (cents)
Total	10,198	91,588	124.64	924	10,699	108.83	349	2,989	99.77	426	1,092	103.71
General contractors	2,285	38,014	120.02	212	5,398	112.21	56	989	91.07	85	1,979	101.86
Special trade contractors	7,913	53,574	127.83	712	5,301	105.41	293	2,000	103.88	341	2,113	105.59
Plumbing, heating	2,480	13,037	122.30	252	1,599	101.01	86	436	88.41	102	527	100.35
Painting, decorating	922	6,762	128.45	53	394	110.18	23	187	114.14	31	170	110.21
Electrical	1,122	7,948	153.28	108	618	115.26	41	247	129.10	62	315	133.73
Masonry, stone, tile, plastering	843	4,203	125.78	78	573	111.44	26	121	100.86	31	177	102.60
Carpentering, wood floors	429	2,101	120.37	28	136	109.53	11	53	74.52	16	57	79.37
Roofing, sheet metal	1,179	9,507	116.33	115	1,035	87.548	56	421	101.27	62	531	91.41
Excavating, grading, foundation, concrete	277	2,630	107.92	14	196	90.348	13	208	72.39	5	76	66.17
All other	661	7,386	130.51	64	750	123.32	37	327	120.71	32	260	117.14

Source: Bureau of Labor Statistics, Division of Construction and Public Employment.

a/ Average hourly earnings include overtime payments.
b/ Data for wage earners employed on Federally financed building construction projects are not included.
c/ Includes: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, and Florida.
d/ Includes: Kentucky, Tennessee, Alabama, and Mississippi.
e/ Includes: Arkansas, Louisiana, Oklahoma, and Texas.

(0186)

Table 12. Building construction: Cumulative percentage distribution of adult male common laborers by hourly entrance rates, for the United States and for the North and the South, July 1942 a/

Hourly entrance rate (in cents)	United States, total	North and West	South and Southwest
Under 30.0	0.3		0.8
30.0 and under	2.8	*	6.7
Under 32.5	2.8	*	6.7
Under 35.0	2.8	*	6.7
Under 37.5	4.7	0.1	11.0
Under 40.0	4.7	0.1	11.0

Source: Bureau of Labor Statistics, Monthly Labor Review, February 1943, p. 325

* Less than a tenth of 1 percent.

a/ The workers reported for this tabulation constitute 31 percent of all wage earners actually reported by these establishments in the North and West region, and 34 percent in the South and Southwest region.

determines the nature of the entire lower portion of an industrial wage scale, 1/ and is therefore very valuable in determining to what extent substandard wages are paid in an industry.

Average hourly wage rates by regions for common labor in road building are published regularly in the Survey of Current Business from compilations by the Public Roads Administration. Table 13 shows that such rates have increased by more than 50 percent from 1938 to the first quarter of 1943. The United States average of average hourly wage rates for common labor advanced from 40 cents in 1938 to 62 cents in 1943. In 1943, average wage rates for common road building labor were higher than 40 cents even in the three Southern regions, being 49 cents per hour in the East South Central and West South Central regions, and 52 cents per hour in the South Atlantic region.

1/ Bureau of Labor Statistics, Hourly Entrance Rates Paid to Common Laborers, 1942, p. 1.

Table 13. Construction Industry: Average hourly wage rates for common labor in road-building by regions, 1938-1943 a/

	U. S. Average	East North Central	East South Central	Middle Atlantic	Mountain	New England	Pacific	South Atlantic	West North Central	West South Central
					(cents)					
1938	40	60	28	50	55	45	66	27	46	37
1939	42	60	29	52	56	48	65	29	45	37
1940	46	62	34	54	55	51	69	30	47	38
1941	48	65	36	57	59	55	75	36	50	40
1942	56	74	42	66	72	65	94	46	61	44
1943 b/	62	89	49	82	90	83	103	52	71	49

Source: Survey of Current Business, from compilations by the Federal Works Agency, Public Roads Administration.

a/ Data represent average hourly wage rates for unskilled (common) labor in road building, on Federal-aid highway projects.

b/ First quarter 1943 only.

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